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(54) CHEMICAL AMPLIFICATION RESIST SUITABLE FOR ELECTRON BEAM LITHOGRAPHY AND CHEMICAL AMPLIFICATION RESIST SYSTEM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a chemical amplification resist exhibiting improved preservability of a resist coating and almost or completely free from the effect of vacuum in use by incorporating an aq. base-soluble polymer or copolymer having polar functional groups, a part of which is protected with specified cycloaliphatic ketal substituents.

SOLUTION: The chemical amplification resist contains an aq. base-soluble polymer or copolymer having polar functional groups, some of which are protected with cycloaliphatic ketal substituents represented by the formula RO-X-as acid decomposable protective groups, an acid generating agent, a solvent for the base-soluble polymer or copolymer, a base and, optionally, a surfactant. In the formula, X is an about 3-12C optionally subst'd. cycloaliphatic functional group and R is about 1-12C linear or branched alkyl or the like.